BOSSCOM Bi1 controller installed in a Bang & Olufsen Beo4 remote control.

User manual

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Operate these devices using the modified Beo4:

Panasonic TV series C10, G10, G15, S10, V10, X10, Z11 series and many more.

Operate devices that are able to operate with RCU's.

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BOSSCOM

Beo4 Translation table.

Daily operation

TV	Turns on the TV
●	Turns off the TV
DTV	TV input
GO GO	OK
*1*2	P+
*1*2	P-
*1*2	Guide
*1*2	Return
EXIT	Exit
GO EXIT	AV sources
MENU	Option
GO MENU	Menu

Factory settings selects these sources, with the Beo4. With options this can can be changed. Se option programming further on.

*1 The up/ down arrow operations can be exchanged with the blue and yellow buttons. See page 6.

*2 As the direct function of the coloured function buttons has been assigned to other functions, these have to be preceded with a GO to retrieve the actual coloured function.

GO	Green function
GO	Yellow function
GO	Red function
GO	Blue function

Text TV operation

TEXT	Text TV on/ off
GO 4	Index
GO 7	Hold
GO 9	STTL

Other operations

GO 0	info
GO 1	Viera tools
GO 2	Viera link
GO 3	Viera cast
GO 6	Sound
GO 9	STTL
GO 5	Aspect

Special/ alternative operations

GO TV	Operate a B&O TV.

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Congratulations

With a BOSSCOM Bi1 interface module from www.bossom.com built in to your Beo4 remote control, you can fully operate your TV with your Bang & Olufsen remote control terminal. This guide explains how.

Refer to the installation section about the initial setup and option programming. There is no programming needed during daily use.

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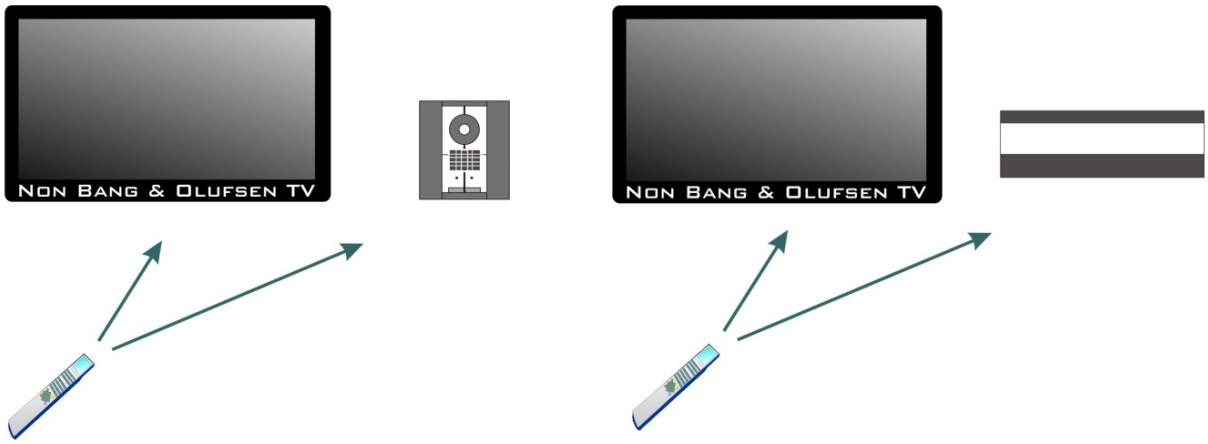
Bi1 Internal controller for the Beo4 remote control

The BOSSCOM Bi1 controller is a small microcomputer module, which is specifically made to be built in to a Bang & Olufsen Beo4 remote control.

The Bi1 controller captures the commands that were meant for operating a Bang & Olufsen device. Before the commands are emitted from the Beo4, these commands are converted, and therefore able to operate a non Bang & Olufsen device.

Bi1 controllers are dedicated controllers made for operating a specific product like an Apple iPod docking station, a flat screen TV, a curtain controller etc.

The Bi1 controller makes the Beo4 able to operate a third part device, but it is still able to operate any other Bang & Olufsen products.



If a Bang & Olufsen audiomaster are in the room, it can be used for the sound. Speakers connected to an audiomaster is normally of a much better quality than the speakers in a TV.
Only a simple audio cable is needed between the TV and the audiomaster. See the option programming section about AAUX mode on page 7.

Operating with BOSSCOM enviroment.

To be able to operate the device optimal with the Beo4 the user has to be familiar with operations with the original remote control as described in the device's user manual.

A beo4 remote control is not equipped with as many keys as most other remote controls. We have designed a 'layout' that works logically, even when shifting between different BOSSCOM operated devices. To get a common layout for many devices, we therefore needed to redefine a few of the beo4 buttons to other functions:

Coloured function buttons.
To make room for easy access to more important functions, we have moved the coloured buttons, to a lower layer. To send a 'color' command from the device's original RCU, a GO must be pressed before the coloured button.

This way we are able to assign other functions to the coloured buttons in direct mode. In a OneRemote environment the coloured buttons are assigned to these operations:

	Guide, EPG or similar.
	Back, Backup, Return or similar.
	Programme zapping. P+/ P , Channel up/ down or CH+/ CH-.

Programme stepping, up/ down manoeuvring in menus.
Most set top boxes or TV's has 4 arrow buttons for moving up, down, left and right in on screen menus. In addition they have separate programme stepping buttons for zapping through programmes. B&O remote controls does not have separate buttons for programme zapping. We therefore have chosen the blue and the yellow buttons to function as programme stepping buttons, in direct mode. The four up, down, left and right buttons have been assigned for manoeuvring in on screen menus, in our basic setup. It is possible to use the up and down arrow for programme stepping, refer to the option section, page 6.

Go or Stop shifted operation.
Some of the buttons has 2 or three functions. To get to these they have to be preceded with GO or STOP. The buttons that has been assigned secondary functions on this controller can be seen in the operating table on page 2.

Option programming

The BOSSCOM controller inside the Beo4 can be programmed with different options, to make it fit in different setups. One or more options might need to be set to optimize your application.

An option programming is carried out by pressing a series of buttons in a sequence that does not occur during daily use. The programming must be ended within 5 seconds.

An ongoing programming sequence can be cancelled by pressing EXIT .

All option programming is initiated by pressing TV GO STOP followed by the actual option.

Disable BOSSCOM Controller Option

The BOSSCOM controller in the modified Beo4 remote control can be enabled or disabled using this option. When disabled the Beo4 remote control operates as an original Beo4.

TV GO STOP 9 1	Disables the BOSSCOM controller.
TV GO STOP 9 0	Enables the BOSSCOM controller. Factory setting.

Zap Mode Option

The Beo4 buttons and are being used for programme stepping, and the ▲ and ▼ buttons are used to manoeuvre up and down in an on screen menu. This is the default factory setting, as described in the chapter 'Operating with BOSSCOM'.

The zap mode option makes it possible to exchange the functions of the up & down buttons with the blue & yellow buttons.

TV GO STOP 9 1	Blue & Yellow is programme zap. Factory setting.
TV GO STOP 9 0	Up & down is programme zap.

Volume, PC and AAUX option.

When the TV is being selected with TV the TV automatically powers on.

If the A.AUX mode is set, the BOSSCOM controller will turn on the TV, and also send an AAUX command in B&O format, to an B&O audiomaster. The audiomaster will therefore also turn on and open for it's AAUX input.

A scart to DIN audio cable between the TV and the audiomaster, can now move the TV sound to the speakers of the audiomaster and the sound quality will be significantly improved.

With the A.AUX option any B&O audiomaster with connected speakers, can add a totally different sound experience to the TV. Older audiomasters from the 80's or newer models can be used via a simple audio cable.

These are the available volume options with this BOSSCOM controller:

TV GO STOP 0 0	Volume buttons are completely ignored.
TV GO STOP 0 1	Volume buttons controls TV directly.
TV GO STOP 0 2	Volume buttons sends volume control to a B&O audiomaster, in B&O format. When the TV is selected, the audiomaster automatically powers on and opens its AAUX socket.
TV GO STOP 0 3	Volume buttons sends volume control to a B&O audiomaster, in B&O format. When the TV is selected, the audiomaster automatically powers on and opens its PC source. For special use.

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Discrete codes.

Some televisions are able to switch to a specific source, using so called discrete IR codes. These are codes that usually is not available as buttons on the TV's own remote control. The Bi1 controller is able to send these codes.

Not all TV models understands these discrete codes, or only some of them. Obviously a discrete code to select the source HDMI4, will not have any function on a TV with less than 4 HDMI sockets. Some TV models have not been manufactured making use of discrete codes at all. The only way to find out if a TV accepts discrete codes, is testing the options that are mentioned below.

If discrete codes will not work with a TV, sources must be accessed the same way as using the TVs original remote control. Using the AV button, Source button, Input button or else.

When a video source button on the Beo4 is pressed like VMEM , DTV , the BOSSCOM Bi1 controller checks if an option is set for this source. If an option is programmed, it will transmit the corresponding discrete code, otherwise it will be ignored.

Programming discrete source codes.

The beo4 source selection buttons DVD DTV *1 VMEM *1 VAUX or PC can each be programmed to open for a specific input socket on the TV.

Programming is done by entering a 5 key code, as examples shown in the table below

1. Programming is initiated by pressing TV GO followed by the source button, that is needed to transmit a discrete code to the TV.
2. Next enter the source code of the input the TV shall open. See the correspondin available source codes in the table on next page.
3. Finally enter the IR-control code.

Code 1 : Following commands will operate the TV.
Code 2 : Following commands will not be converted.

Source option	Beo4 button	Socket on TV	IR control
TV GO VMEM 0 1	VMEM	no new source	TV control
TV GO VMEM 0 2	VMEM	no new source	Beolink TX
TV GO VMEM 1 1	VMEM	opens source "1"	TV control
TV GO VMEM 7 2	VMEM	opens source "7"	Beolink TX
TV GO DVD 0 1	DVD	no new source	TV control
TV GO DVD 9 1	DVD	opens source "9"	TV control
TV GO PC 8 1	PC	opens source "8"	TV control

Examples of source selection.

*1
VMEM is the same button as VTAPE on previous versions of the beo4.
DTV is the same button as SAT on previous versions of the beo4.
DVD is the same as DVR on previous versions of the beo4.

	TV Source selection table
0	Select no new source
1	HDMI 1
2	HDMI 2
3	HDMI 3
4	AV 1
5	AV 2
6	PC
7	SD
8	Component 1
9	TV